

## **REMARKS**

Claims 1-11 are pending in this application.

### **I. Rejections Under 35 U.S.C. 102 and/or 103**

Claims 1-11 were rejected (a) under 35 U.S.C. 102(e) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as allegedly being obvious over U.S. Patent Publication No. 2004/0202881 to Everaerts et al. (hereinafter "Everaerts"), (b) under 35 U.S.C. 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as allegedly being obvious over DE 10036804 to Husemann et al. (hereinafter "Husemann"), and (c) under 35 U.S.C. 103(a) as being allegedly unpatentable over Husemann in view of Everaerts. These rejections are respectfully traversed.

The Patent Office alleges that Everaerts and/or Husemann, taken singly or in combination, teaches or suggests each and every feature of claims 1-11. Applicants respectfully disagree with these allegations.

Everaerts and Husemann, taken singly or in combination, fail to teach or suggest a pressure-sensitive adhesive based on at least 50% of one or more block copolymers comprising at least the unit P(A)-P(B)-P(A), and further wherein the pressure sensitive adhesive has a refractive index  $n_{d,a}$  of  $n_{d,a} \geq 1.52$  at 25 °C, at least one of the (co)polymer blocks P(A) have has a refractive index  $n_{d,A}$  of  $n_{d,A} \geq 1.58$  at 25 °C, and the (co)polymer block P(B) has a refractive index  $n_{d,B}$  of  $n_{d,B} \geq 1.43$  at 25 °C as recited in claim 1.

On page 4 of the Office Action, the Patent Office alleges that when the reference discloses all the limitation of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which

anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to Applicants. However, MPEP 2112-2112.02 and the *Fitzgerald* case support the shifting of the burden of proof to Applicants only where it reasonably appears that the prior art products and the claimed products are identical. MPEP 2112(III) provides that the Examiner can make an alternative 102/103 rejection "[w]here applicant claims a composition in terms of a function, property or characteristic *and* the composition of the prior art *is the same as that of the claims* but the function is not explicitly disclosed by the reference." MPEP 2112.01(I) is to the same effect, stating "[w]hen the PTO *shows a sound basis for believing* that the products of the application and the prior art *are the same*, the applicant has the burden of showing that they are not." Indeed, in the *Fitzgerald* case, as confirmed in MPEP 2112(V), "[t]he court first noted that the two fasteners *were identical or only slightly different from each other.*" Accordingly, the burden remained on the Examiner here unless there was good reason for believing that the prior art products were identical to those instantly claimed.

It is recognized in patent law that, particularly with polymers, the product cannot be defined, nor proven to be anticipated or obvious, based on consideration of structure alone and, therefore, it is proper to define polymers additionally in terms of function and anticipation or obviousness can only be proven by proof of such function. *See, for example, DuPont v. Phillips Petroleum*, 849 F.2d 1430, 1435 (Fed. Cir. 1988) ("On occasion, *particularly with polymers*, structure alone may be inadequate to define the invention, making it appropriate to define the invention in part by property limitations.") In *DuPont*, the claimed polymers were broadly within the cited prior art, but the claims required that the polymer have certain strength limitations. Phillips argued that the property limitations were without meaning, relying on an earlier case of *Titanium Metals*

*v. Banner*, 778 F.2d 775 (Fed. Cir. 1985). However, the court distinguished *Titanium* as involving a situation that did not involve polymers and, moreover, it was unquestioned that the prior art products read on the claims under consideration. In *DuPont*, the court held that Phillips had not proven anticipation because "Phillips had not shown that their [prior art polymers, although meeting the structural limitations of claims,] possess the property limitations set forth in the claims." *See, DuPont*, 849 F.2d at 1436.

There is no good reason to believe that the polymers of the prior art cited here, i.e., Everaerts or Husemann, meet the refractive index limitations of the instant claims and, therefore, no good reason to shift the burden to Applicants to prove they do not possess such limitations. The block copolymers of the instant claims are made from conventional classes of monomers, but are carefully selected so that the particular refractive index limitations recited in the instant claims are met. As described in paragraph [0028] of Applicants' published application, U.S. Patent Publication No. 2006/0057372, blocks P(A) can be built, for example, from vinylaromatics, for example, styrenes, and acrylates. Likewise, as described in paragraph [0029] of Applicants' published application, blocks P(B) can be built, for example, from acrylates. The point is that while the blocks P(A) and P(B) can be built from such conventional classes of monomers, the built blocks have to meet the refractive index parameters recited in the claims and the pressure sensitive adhesive as a whole must meet the refractive index parameters recited in the claims. And, Applicants have provided in the instant specification in the examples three successful pressure sensitive adhesives built in this fashion that meet all of the refractive index parameters recited in the instant claims. See Table 2 following paragraph [0123] of Applicants' published application. These exemplary pressure sensitive adhesives not only meet the required refractive

index parameters, but also function well as pressure sensitive adhesives and have other improved properties, including transparency. See Tables 3-6 of Applicants' published application. This proves that it is possible to proceed according to the teachings of the instant application and achieve a useful pressure sensitive adhesive having these properties.

Paragraph [0007] of Applicants' published application discusses previous attempts to adapt the refractive index of pressure sensitive adhesives. The need to do so confirms that the refractive index of conventional pressure sensitive adhesives is not optimal. Indeed, one of the references discussed in paragraph [0007] is U.S. Patent No. 6,266,166 (hereinafter "the 166 patent"). The 166 patent confirms that conventional pressure sensitive adhesives typically have refractive indices well below that required by the instant claims. At column 3, lines 6-10, of the 166 patent teach the following:

"[T]he refractive index of conventional pressure-sensitive adhesives is about 1.4 to 1.46, which is *greatly different* from the refractive index of the transparent substrate supporting the recording material layer for hologram formation, *about 1.52.*"

This is explained in greater detail at column 8, lines 30-38 of the 166 patent:

"Further, it should be noted that the refractive index of conventional pressure sensitive adhesives is about 1.4 to 1.46, while the refractive index of conventional transparent substrates in dry plates for photographing a hologram is, for example, about 1.52. This *large difference* between the pressure-sensitive adhesive and the transparent substrate poses a problem of the prior art that light reflection is likely to occur at the interface of the pressure sensitive adhesive layer and the transparent substrate."

As is clear from the 166 patent at column 9, line 48, through column 10, line 6, the scope of "conventional pressure sensitive adhesives" includes polymers and copolymers based on acrylic resins and styrene resins. See, also, the Comparative Example at column 15 of the 166 patent, showing a conventional acrylic pressure sensitive adhesive having a refractive index of 1.465.

A number of important facts can be gleaned from the disclosure of 166 patent. First, conventional pressure sensitive adhesives, including those of the general type relied on by the Examiner, i.e., acrylate and/or styrene based, are well known in the art to have refractive indices ranging from about 1.4 to 1.46.

Second, the difference in refractive index between the conventional value of 1.46 and the instantly claimed value of 1.52 is not a trivial difference because the 166 patent describes the exact same difference in the two quotes set forth above as, respectively, "greatly different" and a "large difference."

Third, it follows that the instantly claimed adhesives, possessing a refractive index of at least 1.52, must be significantly different from conventional pressure sensitive adhesives possessing a refractive index of 1.4-1.46.

The problem of less than optimal refractive index is discussed in the background paragraphs of the instant application. See, paragraphs [0002]-[0007] of Applicants' published application. As discussed in paragraph [0007], the 166 patent solves the problem by mixing the pressure sensitive adhesive with a large amount of a tackifier resin having a very high refractive index. This "boosts" the refractive index of the combination of the pressure sensitive adhesive + tackifier resin to 1.52, which is between the refractive index of the pressure sensitive adhesive (1.4-1.46) and the tackifier resin (1.5-1.65, as indicated at column 8, lines 38-41 of the 166 patent).

In contrast, Applicants solve the problem in a different way by, as noted above, unconventionally carefully selecting the monomers, copolymer blocks P(A) and P(B), and ultimate pressure-sensitive adhesive to meet certain refractive index criteria.

There is nothing in the cited references, and the Examiner does not point to anything, to indicate or suggest that the materials described therein have a refractive

index other than one falling within the conventional range for such materials. Indeed, Husemann does not appear to mention refractive index at all and the only reference made by Everaerts of "refractive index" is in paragraph [0131] relating to the use of a refractive index *detector* to measure polydispersity. There is nothing in either reference about making a selection of monomers, copolymer blocks P(A) and P(B) or ultimate pressure-sensitive adhesive based on refractive index. Given the fact that Applicants prepare their polymers with certain refractive index criteria firmly in mind and the cited prior art does not do the same, there is no good reason to believe that the cited prior art obtains a pressure sensitive adhesive meeting the terms of the instant claims. Instead, the reasonable expectation is that without making such selection, the cited prior art obtains pressure sensitive adhesives having a refractive index in keeping with that exhibited by other conventional pressure sensitive adhesives, i.e., 1.4 to 1.46. In view of the differences in refractive indices, such pressure sensitive adhesives would further be expected to be "greatly different" and "largely different" from the instant pressure sensitive adhesives as confirmed by the 166 patent.

To the extent the Examiner takes the position that it would have been obvious to try high refractive index monomers, Applicants respectfully submit that there is no such support in the record. Even if certain monomers have the requisite high refractive index, the 166 patent confirms the pressure sensitive adhesives made from such monomers did not have a refractive index higher than 1.4-1.46. Moreover, there is no teaching or suggestion in the cited prior art to move in that direction. As indicated, the 166 patent overcomes the problem by looking elsewhere, i.e., to incorporating a tackifier with a higher than needed refractive index to counterbalance the lower than necessary refractive index of the conventional pressure sensitive adhesive. The absence of a

teaching or suggestion that the pressure sensitive adhesive can be manipulated by appropriate selection of monomers and copolymer blocks P(A) and P(B) to achieve an ultimate pressure sensitive adhesive with the requisite refractive index, such would not have been obvious. The Federal Circuit very recently in *Ortho McNeil Pharmaceuticals, Inc., v. Mylan Laboratories, Inc., et al.*, --- F.3d ---, 2008 WL 834402 (Fed. Cir. 2008), confirmed that “a flexible TSM test *remains* the primary guarantor against a non-statutory hindsight analysis such as occurred in this case (emphasis added).” According to the Court, “[t]he TSM test, flexibly applied, merely assures that the obviousness test proceeds on the basis of *evidence*—teachings, suggestions (a tellingly broad term), or motivations (an equally broad term)—that arise before the time of invention as the statute requires (again, emphasis added).” *Id.*

Because the features of independent claim 1 are not taught or suggested by Everaerts and Husemann, taken singly or in combination, these references would not have rendered the features of claim 1 obvious to one of ordinary skill in the art.

For at least these reasons, claims 1-11 are patentable over the applied references. Thus, withdrawal of the rejections under 35 U.S.C. 102 and 103 is respectfully requested.

## **II. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-11 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Early and favorable action is earnestly solicited.

**CONDITIONAL PETITION FOR EXTENSION OF TIME**

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

**ADDITIONAL FEE**

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,  
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